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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,808	12/29/2005	Amir Meir	ELG-P-5997US	6575
43214	7590	12/11/2007	EXAMINER	
EMPK & SHILOH, LLP			TSE, YOUNG TOI	
116 John St.			ART UNIT	
Suite 1201			PAPER NUMBER	
New York, NY 10038			2611	
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			12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/562,808

Applicant(s)

MEIR ET AL.

Examiner

YOUNG T. TSE

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 25 September 2007. These drawings are acceptable.

### ***Claim Objections***

2. Claims 13, 14, 20 and 25 are objected to because of the following informalities:

In claim 13, lines 3 and 4, "said up-link" and "said down-link" should be "said down-link" and "said up-link", respectively.

In claim 14, line 1, "comprising" should be "further comprising".

In claim 20, line 2, "output signal" should be "output".

In claim 25, line 6, "signals" should be "signals correlated to the digital signal" to avoid the antecedent basis of "the filtered digital signal" recited in the last two lines of claim 25.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6 and 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al., U. S. Patent No. 6,259, 682 (hereinafter "Brown") in view of Ngai et al. U.S. Publication No. 2006/0003793 A1 (hereinafter "Ngai").

Regarding claims 1 and 15, Brown discloses a radio transceiver circuit in Fig. 2 comprises an attenuator (78) to produce an attenuated signal by attenuating a parameter of an input signal; a power amplifier (80) to produce an output signal by amplifying the attenuated signal; a power monitor (90) to monitor the power level of the output signal; and a RF gain controller (68, 92) able to adjust the output power by controlling the attenuation of the input signal by the attenuator based on traffic load characteristics sampled during operation of a network. Although Brown does not explicitly show or suggest that the RF gain controller to sustain the output power level of a repeater used in Brown's base or mobile station substantially at a desired, predefined, level during operation of a network.

Ngai also discloses a mobile wireless terminal (MWT) communication system in Figure 2, wherein the transmitter power monitor 234, coupled to an output of the power amplifier 228, monitors a power level of amplified, aggregate transmit signal 230, provides a signal 236 indicating the power level of amplified, aggregate transmit signal 230 to the controller 214, and measures the power level of aggregate signal 226 at the input to the transmit power amplifier 228 (paragraph [0060]). Ngai also teaches the MWT controller adjusts the individual transmit power limit in the multiple modems based on an aggregate transmit power limit of the MWT and respective transmit power estimates from the modems, to cause each individual transmit power limit to track a corresponding individual modem transmit power (abstract) and controls the input/output output power of the power amplifier in the MWT so as to avoid over-driving the power amplifier. There is a related need to control the output power as just mentioned, while minimizing to the extent possible, any reduction of the forward and reverse link bandwidth (paragraph [0007]). Also see paragraphs [0010] and [0013].

Therefore, it would have been obvious to one of ordinary skill in the art as taught by Ngai in order to use a transmitter power monitor and a control circuit in Brown's transmitter section of the communication system to sustain or maximize the output power level of a repeater used in Brown's base or mobile station substantially at a desired, predefined, level during operation of a network.

Regarding the method claims 2-6 and 8-14 and the rest of the apparatus claims 16-20, the claimed subject matters are either clearly or inherently performed by the radio system shown in Figures 2 and 3, as discussed in col. 3, line 38 to col. 4, line 47.

6. Claims 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al., U. S. Patent No. 6,374,119 (hereinafter "Jun") in view of Ngai et al. U.S. Publication No. 2006/0003793 A1 (hereinafter "Ngai").

Regarding claim 21, Jun discloses a radio system in Figure 5 comprises: a receiver (down link) to receive a signal, for example, from a duplexer 1400; a filtering unit (1610) configured to pass frequency components at or around a frequency band of a predefined communication channel; an attenuator (1630) to produce an attenuated signal by attenuating a parameter of the signal; a power amplifier (1680) to adjust the power of an RF output to a desired level by adjusting a gain of one or more components of the radio system; and a microprocessor (1500) to receive an input responsive to the power of the RF output and, based on the input, to provide adjustment control signals to the receiver and the attenuator. Also see Fig. 6 and col. 5, line 44 to col. 6, line 36. Although Brown does not explicitly show or suggest that the RF gain controller to sustain the output power level of a repeater used in Brown's base or mobile station substantially at a desired, predefined, level during operation of a network.

Ngai also discloses a mobile wireless terminal (MWT) communication system in Figure 2, wherein the transmitter power monitor 234, coupled to an output of the power amplifier 228, monitors a power level of amplified, aggregate transmit signal 230, provides a signal 236 indicating the power level of amplified, aggregate transmit signal 230 to the controller 214, and measures the power level of aggregate signal 226 at the input to the transmit power amplifier 228 (paragraph [0060]). Ngai also teaches the MWT controller adjusts the individual transmit power limit in the multiple modems based

on an aggregate transmit power limit of the MWT and respective transmit power estimates from the modems, to cause each individual transmit power limit to track a corresponding individual modem transmit power (abstract) and controls the input/output output power of the power amplifier in the MWT so as to avoid over-driving the power amplifier. There is a related need to control the output power as just mentioned, while minimizing to the extent possible, any reduction of the forward and reverse link bandwidth (paragraph [0007]). Also see paragraphs [0010] and [0013].

Therefore, it would have been obvious to one of ordinary skill in the art as taught by Ngai in order to use a transmitter power monitor and a control circuit in Jun's transmitter section of the communication system to sustain or maximize the output power level of a repeater used in Brown's base or mobile station substantially at a desired, predefined, level during operation of a network.

Regarding claim 22, wherein either or both of the receiver and the attenuator (1630) are able to adjust the signal received by the receiver to a desired input level based on the adjustment control signals.

Regarding claim 23, wherein either or both of the receiver and the attenuator (1630) are able to adjust a parameter of the frequency components passed by the filtering unit (1610) based on the adjustment control signals.

Regarding claim 24, although Jun does not explicitly show or suggest that the power amplifier unit comprises an additional attenuator to reduce the amplitude of the signal, it is inherent or well known to a person skill in the art to have one or two attenuator used in Jun's amplification section, for example, in order to further attenuate

the amplitude of the received signal to increase the power for the high power amplifier (1680) to achieve the power requirement of the radio system.

Regarding claim 25, although Jun does not explicitly show or suggest that the filtering unit (1610) comprises: an analog to digital converter to generate a digital signal correlated to the received signal, a digital filter configured to pass frequency components at or around the frequency band of a communication channel and to exclude frequency components indicative of interference signals, and a digital to analog converter to generate an analog signal correlated to the filtered digital signal, again, it is inherent or well known to a person skill in the art to include an analog to digital converter prior the filter (1610) when the filter is a digital filter because the received signal is an analog signal and need to provide a digital to analog converter prior the high power amplifier (1680) for converting the digital filter signal into an analog signal when the High power amplifier (1680) is an analog amplifier.

Regarding claim 26, wherein the microprocessor (1500) is able to monitor oscillations of the mixers (1640, 1690) and, upon detecting an oscillation event, to cause one or more components of the system to modify the a gain of one or more components of the system according to a predetermined scheme.

Regarding claim 27, wherein said processor (1500) is able to modify the gain of the one or more components by sending to the one or more components control signals responsive to a desired modification according to the predetermined scheme.



***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dybdal relates to satellite transmitters have a maximum power output level. The output power level of a transmitter is controlled by varying the output power level to the transmitter so that the output level is maintained at a level providing maximum capacity.

Dagleish et al. relates to a system and method for a self-configuring repeater in a telecommunications network. The repeater receives data from a base transceiver station via a downlink channel and sends data to the base transceiver station via an uplink channel and compares the power level of a downlink signal.

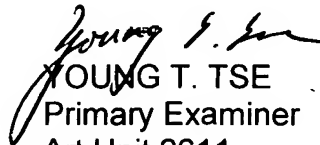
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
YOUNG T. TSE  
Primary Examiner  
Art Unit 2611